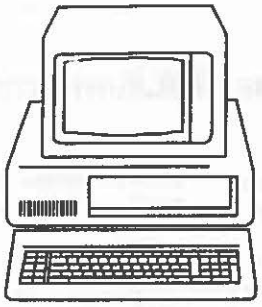
1990-09-28

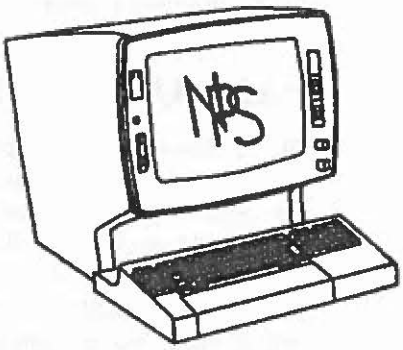
# Computer Center Bulletin / 1990-09-28

Monterey, California, Naval Postgraduate School



# Computer Center BULLETIN

*Naval Postgraduate School Monterey, California*



September 28, 1989

# FALL QUARTER TALKS

The Computer Center staff will give twenty-nine talks at the beginning of this quarter to acquaint users with the various facilities of the VM/CMS timesharing and MVS batch systems available on the mainframe and with the services available in the Center's Microcomputer Lab. In addition, Prof. P. A. W. Lewis (OR) will present two introductory talks about interactive statistical/graphical services using APL.

The following nine talks will be given in Spanagel Hall and Ingersoll Hall (Sp-421, In-361, In-260 and the In-122 auditorium). *Signup for these sessions is not required.*

## INTRODUCTION TO VM/CMS:

| | | | |
|---|---|---|---|
| 1510 Wednesday | 4 October | Roger Hilleary | Sp-421 |
| 1210 Friday | 6 October | Roger Hilleary | Sp-421 |
| 1510 Thursday | 12 October | Roger Hilleary | In-260 |

This talk is given three times; it assumes no prior knowledge of the Center's computer. Topics to be covered include the use of the 3278 terminal, how to logon and logoff, use of the function keys, the HELP facility, and various general-purpose commands. It is strongly recommended for all new users of the Center and covers information which may not be provided in an introductory programming class. Be sure to bring a copy of Technical Note VM-01, *User's Guide to VM/CMS at NPS.* (A copy of this publication is usually provided when a new user registers in In-147.)

## INTRODUCTION TO XEDIT:

| | | | |
|---|---|---|---|
| 1510 Thursday | 5 October | Helen Davis | In-260 |
| 1210 Tuesday | 10 October | Helen Davis | In-260 |
| 1410 Wednesday | 11 October | Karen Yates | In-361 |

This talk is presented three times. It provides elementary information about the XEDIT full screen editor. The main emphasis is on methods for creating and changing programs and other files. Use of the PF keys and HELP facility in XEDIT are mentioned. The talk assumes little or no familiarity with XEDIT, but prior attendance at *Introduction to VM/CMS* is recommended.

## MICRO/MAINFRAME COMMUNICATIONS: IN-122

| | | |
|---|---|---|
| 1310 Monday | 23 October | Donna Schoenecker |
| 1410 Thursday | 26 October | Donna Schoenecker |

This talk will be given twice this quarter. The first 25 minutes of this talk covers the SIM3278/VM protocol converter running on the IBM 3033 mainframe. SIM3278/VM converts an incoming data stream from asynchronous ASCII devices to 3278 terminal screen images, thus permitting microcomputer and ASCII terminal users to dial up and use the mainframe. Consequently they can use all the full-screen programs and utilities of VM. The second half is a discussion of SIM/PC, a companion product, for IBM PC and PC-compatible users. It provides asynchronous communications, including keyboard definition of 3278 PF keys on the PC keyboard. SIM/PC is available to all authorized users at NPS.

## INTRODUCTION TO E-MAIL: IN-122

| | | |
|---|---|---|
| 1510 Monday | 23 October | Caroline Miller |

Every IBM mainframe user at NPS has two electronic mail addresses. This talk provides information on the electronic mail services supported by the Computer Center on the IBM mainframe. Two data networks will be introduced: the informal BITNET (Because It's Time NETwork) and the DDN (Department of Defense Network). Topics to be discussed include procedures for sending a short note to a local or remote computer, how to transfer files between different computers, and what information is available to assist in finding the network addresses for persons who may be contacted via the networks.

All other talks, described below, will be given in In-119, In-151, Ro-260, or Ro-262. *Signup for these sessions is required. Those interested in attending should sign up in the Consulting Office, In-146 to reserve a seat.*

## APL AND RELATED PROGRAMS ON MICROCOMPUTERS: RO-260

| | | |
|---|---|---|
| 1410 Wednesday | 11 October | Prof. P.A.W. Lewis |

This talk presents STSC's APL*plus product for microcomputers as well as their implementation of

APL2. STATGRAPHICS, an APL based graphics and statistics package for microcomputers, and various other programs are also discussed. WSTRAN, a program for mainframe to microcomputer transmission of workspaces will be demonstrated. Features of the new STATGRAPHICS 3.0 and APL 5.0 will be discussed.

## INTRODUCTION TO WORDPERFECT: RO-262

| | | |
|---|---|---|
| First Series: | | |
| 1610 Wednesday | 11 October | Kathy Strutynski |
| 1610 Thursday | 12 October | Kathy Strutynski |
| Second Series: | | |
| 1610 Wednesday | 18 October | Kathy Strutynski |
| 1610 Thursday | 19 October | Kathy Strutynski |
| Third Series: | | |
| 1610 Monday | 23 October | Naren Tayal |
| 1610 Wednesday | 25 October | Naren Tayal |

*Enrollment for these talks is open only to students and faculty*. The talk is given in two different classes. Each class takes 90 minutes and requires attendance at both parts. This series of two talks will be given three times this quarter. Class space is limited. *Sign up for one pair of talks only*. These talks are hands-on tutorials about WordPerfect in general; see below for a talk on the use of WordPerfect to produce a thesis in NPS-approved format.

WordPerfect is the most widely used word processor in the world. These talks will introduce you to most of its fundamental capabilities. You will also be shown how to use some of its special features — the spelling checker, the thesaurus, and outlines/tables/indexes.

## INTRODUCTION TO GML: IN-119

**1310 Tuesday 10 October Larry Frazier**

Generalized Markup Language (GML) provides a set of commands that simplifies the task of using the DCF document composition facility of ScriptVS to prepare papers and other research publications on the mainframe. It takes care of footnotes, figures, tables, and mathematical formulas and will also generate a Table of Contents for your paper. Graphics from Disspla and Grafstat may be printed directly with GML laser printer output.

## INTRODUCTION TO SPSS-X: IN-119

**1310 Thursday 12 October Helen Davis**

SPSS-X, the Statistical Package for the Social Sciences, is a comprehensive tool for managing, analyzing, and displaying information. The speaker will describe the required data formats and SPSS-X control statements for a simple problem. Both batch and timesharing modes of execution will be demonstrated. This talk is intended for new users of SPSS-X.

## INTRODUCTION TO SAS: IN-119

**1410 Thursday 12 October Dennis Mar**

SAS, the Statistical Analysis System, is a flexible program for handling all phases of data analysis: retrieval, data management, statistical analysis, and report writing. It has excellent features for merging and subsetting data sets. The speaker will describe the required data format and SAS control statements for a simple problem. Both the batch and timesharing modes of execution will be demonstrated.

## INTRODUCTION TO GTHESIS: IN-119

**1510 Thursday 12 October Larry Frazier**

GThesis is an addition to the IBM Script (DCF) document composition system that simplifies producing a thesis to NPS standards. The talk will be useful only to those with some familiarity with Script (GML). Attendees should also read and bring along the first three chapters of TN VM-14, the GThesis documentation, which is available in In-146. See above for the related GML talk.

## INTRODUCTION TO GRAFSTAT: RO-260

**1510 Thursday 12 October Prof. P.A.W. Lewis**

This talk will give a brief introduction to GRAFSTAT, an APL package for interactive scientific-engineering plotting, graphics output development, applied statistics, and data analysis. The program features a full-screen interface, complete on-line help, color graphics capability and effectively combines computation and graphics. Complete routines for least squares fitting, fitting of probability distributions, design and implementation of quality control charts, regression and time series analysis are available.

## WORDPERFECT FOR THESES: IN-119

**1310 Tuesday 17 October Larry Frazier**
**1510 Thursday 19 October Larry Frazier**

This talk will be given two times. It covers the use of WordPerfect to produce a thesis in NPS-approved format. *Those attending this talk must be familiar with WordPerfect,* either through attendance at a Computer Center talk or by training or practice elsewhere. Topics covered include specific formatting requirements for theses, and Style Sheets developed at NPS to simplify the production of theses. On-line documentation in the form of a sample thesis will be provided; this and the style sheet can be copied for use with WordPerfect 5.0 elsewhere.

## INTRODUCTION TO MINITAB: IN-119

**1410 Thursday 19 October Dennis Mar**

Minitab is an interactive statistical computing system available on VM/CMS. It is designed for moderate-size data sets which can be stored on a CMS A-disk. Minitab is quick and especially useful for exploring data, plotting, and regression analysis. Attendees should be familiar with the timesharing system.

## USING THE XEROX NETWORK: IN-151

**1610 Thursday 19 October Tony Coloma**

This is a combination 75-minute talk and lab session. Xerox workstation features covered include illustrations and graphics, tables, mathematical formulas, data driven graphics, transparencies for demonstrations, manipulating scanned images, and converting WordPerfect or ASCII files to Xerox and vice versa.

## INTRODUCTION TO MS-DOS: RO-262

**1410 Thursday 19 October Donna Schoenecker**
**1210 Tuesday 24 October Donna Schoenecker**
**1410 Wednesday 25 October Donna Schoenecker**

*Enrollment for these talks is open only to students and faculty.* This is a combination 75-minute talk and lab session; it will be given three times. It is designed for beginners who are interested in learning how to use the operating system of any IBM or IBM-compatible microcomputer. Various elementary IBM Disk Operating System commands will be discussed. Use of, and naming conventions for, DOS files and other basic concepts will also be covered. In addition, participants will be given information on using the Micro Lab's Ungermann-Bass/Novell network.

## INTRODUCTION TO REXX: IN-119

**1410 Thursday 26 October Dennis Mar**

REXX is a CMS command programming language. It is the successor to EXEC2. REXX is especially useful for creating personal execs and XEDIT macros. This introductory talk covers REXX input/output, variable manipulation, structured programming features, and embedding CP and CMS commands.

## INTRODUCTION TO ICU: IN-119

**1510 Thursday 26 October Karen Yates**

This is a combination talk and demonstration session on the Interactive Chart Utility (ICU). ICU is an interactive graphics utility that offers mainframe users a method to create presentation-quality charts with ease. ICU features online help, data input from an on-line file, multiple charts on one page, and chart selections such as: Scatter Plots, Tables, Histograms, Surface, Pie, Polar, and Tower Charts. Topics covered will include data input, interactive editing, printing on the mainframe laser printer, and imbedding an ICU chart within Script/GML.

## MAINFRAME WORDPERFECT: IN-119

**1610 Thursday 26 October Naren Tayal**

WordPerfect 4.2 is available under VM/CMS. WordPerfect's spell-checker, thesaurus, on-line help, and formatting commands are all available. Centering, right adjust, tabs, margin changes, etc., take effect on the screen of any mainframe terminals as soon as you press Enter. Of particular benefit is fully-formatted printing on the high speed mainframe printer. An article describing WordPerfect 370 appears in this issue of the Bulletin.

## ADVANCED MS-DOS: RO-262

**1410 Tuesday 31 October Kathy Strutynski**

*Enrollment for this talk is open only to students and faculty.* This is a combination lecture and lab session designed to increase your knowledge of the DOS operating system and help you become a more efficient

user of your PC. You will learn how to use tree-structured directories to organize your files, how to create batch files to save time and keystrokes, and you will be introduced to the sophisticated commands and command filters of DOS 3.1 — ASSIGN, ATTRIB, BACKUP, FIND, MORE, SORT, etc.

# MVS ANNOUNCEMENTS

## UNUSED MVS DATA SETS DISAPPEAR

On the first working day of each quarter, data sets which have not been opened for two years are deleted from the MVS batch processing system. This will next happen on Monday, October 2; all those data sets which are listed in the Consulting Office (In-146) will be removed from the system. To see if there are any data sets associated with your userid that are in this category, use Section 9 ("Expiring MCS data sets") of the MVS exec MVSHELP. It will print a list of your files. If you need more information or help, please contact Linda Mauck, In-105, x2651, before 2 October.

*Linda Mauck*

## PROTECT PRIVACY ACT DATA WITH SAS

Privacy Act data is any personal or private information which can be connected with particular individuals. Examples of this type of data are Social Security numbers, academic grades, notations concerning disabilities, or even just family members' names and ages. Data of this sort are protected by the Privacy Act of 1974 and must be protected from casual disclosure.

To protect such files the owner must insure that unauthorized personnel cannot gain access. Data stored under DFHSM (the batch processor disk storage system) can be read by any MVS user. However, the SAS statistical package has a way of protecting files by allowing a user to specify a password when creating a SAS data set. Subsequently the password must be given to read the SAS data set. Additionally, SAS will 'x'-out the password on the SAS log so that your printouts will not disclose that information.

To specify a password that protects a SAS data set, use the *READ=* option of the DATA statement when the data is being stored under DFHSM. The following sample job will create a SAS data set with password protection:

```
//PROTECT  JOB (1234,9999),'SAMPLE',CLASS=E
//*MAIN SYSTEM=SY2
//    EXEC SAS
//INTAPE DD UNIT=3400-5,VOL=SER=NPS999,
//    DISP=(OLD,PASS),LABEL=(1,SL),
//    DSN=MNPWR.DATA
//OUTFILE DD DISP=(NEW,CATLG,DELETE),
//    UNIT=SYSDA,SPACE=(TRK,(2,1),RLSE),
//    DSN=MSS.S1234.MNPWR.DATA
//SYSIN DD *
DATA INTAPE.MNPWR(READ=X2Y9W);
/* password protects file */
  INFILE INTAPE;
     INPUT
     SSN      1-9
     GENDER   11
     RACE     13;
PROC FREQ DATA=INTAPE.MNPWR(READ=X2Y9W);
/* must use password */
     TABLES GENDER RACE;
/*
//
```

Passwords can be up to eight valid characters; they must begin with a letter or an underscore (_). Note: X2YNW in this JCL is an *example*. Select your own password. Valid characters are letters, numbers, and underscores. Note that, in the above example, whenever the SAS data set ddname.MNPWR is read, the READ=password must be included as it is in the PROC FREQ statement.

The following job will read the password protected SAS data set stored under DFHSM.

```
//PROTECT  JOB (1234,9999),'PROTECT',CLASS=A
//*MAIN SYSTEM=SY2
//    EXEC SAS
//INFILE DD DISP=SHR,
//    DSN=MSS.S1234.MNPWR.DATA
//SYSIN DD *
DATA TEST;
  SET INFILE.MNPWR(READ=X2Y9W);
  /* must use password to access */
PROC FREQ DATA=TEST;
     TABLES GENDER RACE;
/*
//
```

Any SAS jobs which contain your SAS data set passwords should be stored on your A-disk with a filetype of A0. Filetypes of A0 cannot be read by anyone linking to your A-disk.

*Helen Davis*

# SOFTWARE PRODUCTS

## NEW DEFAULT MINITAB

As of 2 October, Release 7.1 becomes the default version of Minitab. Installation of that release of the Minitab statistical package brings IBM mainframe us-

ers up to date with the commercially available documentation.

To access Minitab, type the standard:

MINITAB

New procedures were mentioned in the previous issue of the *Bulletin:*

| | |
|---|---|
| **GLM** | general linear model |
| **ANCOVA** | analysis of covariance |
| **DISCRIMINANT** | discriminant analysis |
| **XBARCHART** | control charts |
| **PCA** | principal component analysis |
| **MOOD & FRIEDMAN** | nonparametric analysis of variance |
| **BREG** | all subsets regression |
| **RREGRESS** | rank regression |

Saved Minitab workspaces (filetype MINITABW) created by Minitab Release 5.1 can be read by Release 7.1. The opposite is not true. Old workspaces should be re-saved under Release 7.1 because the new workspaces will be more densely packed and save considerable space on your A-disk.

To simplify the life of a Minitab user, data files to be read by Minitab (filetype DATA) will no longer be restricted to fixed record format or line width 80. Data files may have variable record format and line width as large as 160.

Any problems with Minitab Release 7.1 should be reported to Dennis Mar, In-102A, x2672, userid 2001P. The previous release, 5.1, will be available through the fall quarter. If no problems are found with the new release, Release 5.1 will be removed at the end of the fall quarter. To access Release 5.1, type:

MTAB51

*Dennis Mar*

## PLEASE TRY VS FORTRAN 2

About a year ago we announced that Version 2 of IBM's VS Fortran compiler was available for familiarization by our Fortran users. Release 3 of Fortran 2 is available on both operating systems. Whatever new mainframe hardware is in our future, it will use VSF2 or some similar product.

Features of VSF2 include:

- A dynamic COMMON capability for accessing large data arrays. (This doesn't allow addressing above 16MB yet, but you can get ready by learning how to use the DC Compiler Option.)
- An Intercompilation Analyzer (ICA) for detecting inconsistencies between program modules, *e.g.,* REAL*4 argument declared REAL*8 in a subroutine;
- Further development of the INCLUDE feature which provides the capability of using shared patterns of source code across modules;
- An Interactive Debugging Facility (IAD). Users will require special instructions for this feature, since present memory allocations barely accommodate IAD;
- Symbolic names can now be up to 31 characters in length;
- An IMPLICIT NONE statement can be used to require type declarations for every variable and function;
- DO WHILE/END DO statements;
- Built-in routines to extract the date, time-of-day, and elapsed cpu time;
- The NOXUFLOW run-time option to suppress exponent overflow messages;
- And much, much more.

Complete documentation is available in three manuals from IBM: *VS Fortran Version 2 Language and Library Reference,* SC26-4221; *VS Fortran Version 2 Programming Guide,* SC26-4222; *VS Fortran Version 2 Interactive Debug Guide and Reference,* SC26-4223. Copies are available for reference in In-146. (See bulletin board in that room for information on ordering personal copies from IBM.)

To use VSF2 on VM, the user must first obtain 1500K of virtual storage. Issue:

```
GETSTOR 1500K
```

Invoke the compiler by issuing:

```
FORTVS2 <fn> (options
```

Examples of possible user options: OPT(3), NOPRINT, AD(DBL4), SDUMP

The user must also declare the required txtlibs and loadlib for VSF2:

```
GLOBAL TXTLIB VSF2FORT CMSLIB ...
  (plus any libraries required by the individual user)
GLOBAL LOADLIB VSF2LOAD
```

To load and execute, type:

```
LOAD <fn> (START
```

Note that automatic linkage to the VSF2 virtual disks is performed by the FORTVS2 exec. When running a previously compiled program, explicit linkage must be performed before the GLOBAL libraries can be used. To do that, issue

```
FORTLINK
```

Cataloged procedures have been provided for using VSF2 under MVS. These are:

| | |
|---|---|
| **VSF2CLG** | Compile, linkedit, execute |
| **VSF2C** | Compile only |
| **VSF2CL** | Compile and linkedit |
| **VSF2CG** | Compile and run with loader program |
| **VSF2G** | Load previously compiled/linkedited program and go |
| **VSF2CLGD** | Compile, linkedit, and run with DISSPLA output |
| **VSF2CLD** | Compile and linkedit with DISSPLA libraries |

There are other cataloged procedures for special purposes. Use the GETPROC exec to see the exact form of any procedure.

For further information or assistance contact Roger Hilleary, In-133, x2752, userid 0002P.

*Roger Hilleary*

# MICRO LAB TOPICS

## MILITARY DOMAIN USERS' GROUP

Command and Control Micro Users' Group (C2MUG), sponsored by Fort Leavenworth, Kansas, is a military domain micro users group that has an extensive library of both military and public domain software for IBM-compatible and Macintosh systems. Their current catalog contains listings for over 700 diskettes of software. Members may download software from their computer bulletin board (BBS) which operates during non-duty hours (Monday through Friday 1600--0800 and all day on weekends and holidays) at 1200 and 2400 baud. Membership in the group is open to anyone affiliated with the Department of Defense. To enroll, contact C2MUG by one of the following methods:

Write to:

Command and Control Micro Users' Group (C2MUG)
Associate Director, MCSD
AMSEL-RD-SE-BCS-MC (C2MUG)
Bldg 138
Fort Leavenworth, KS 66027-5600

Call:

| | |
|---|---|
| AV | 552-7550/7552 |
| Bulletin Board | 552-7675/7676 |

POC: Mr. Darrell Holland
Mr. Dathan Hammer

MILNET Address:

```
AMSEL-RD-SE-BCS-MC (C2MUG) at CECOM-2.ARPA
```

*Donna Schoenecker*

## NPS ADP SECURITY PROGRAM

NAVPGSCOL Instruction 5239.1, issued on 30 June 1989, establishes the ADP security program for the School. The purpose of the program is to prevent unauthorized, accidental, or deliberate destruction, modification or disclosure of data and denial of service to users. It applies in full to the facilities available in the Computer Center Micro Lab (In-151). Lab users should note paragraph 201., *AREAS OF CONCERN*, which states:

**Adherence to copyright licensing agreements for software used at NPS or operated on its behalf will be strictly observed, and software will not be installed on ADP equipment for which it is not specifically licensed or authorized for use. Commercial software will not be copied for personal use or retention.**

In addition, the plan outlines three classifications for data: Level I (Classified Data), Level II (Unclassified Data, Special Protection Required), and Level III (All Other Unclassified Data), and the handling requirements of each.

At the present only Level III type data may be stored on the Micro Lab file servers. Level II data includes such things as information protected by the Privacy Act (information of a personal nature); information which would appropriately be stamped "FOR OFFICIAL USE ONLY" if on a printed page; all information relating to sensitive financial matters; sensitive management information on promotions, bonuses, or departmental reorganizations; information about financial, family or social affairs; and data about medical, employment, political, or criminal history. Examples are student grade rosters, social registers, employee evaluations and performance reviews, letters to or concerning an employee, and research proposals containing business confidential and/or proprietary information.

Level I (classified) data is not processed at the Computer Center, either on the mainframe or in the Micro Lab.

If you have any questions about your data, please ask a member of the staff. A copy of NAVPGSCOLINST 5239.1 is available at the Micro Lab for reference.

*Donna Schoenecker*

# PERSONNEL CHANGES

A number of Computer Center people have staged their own "Back to School" migration. Dina Cepeda left Operations to take a job as an administrative assistant on the UC Santa Cruz campus. Dina had worked here as an operator since summer, 1988. We offer our best wishes on her new job and congratulate her on this career advancement.

Our student Micro Lab assistants have returned to their college studies: Erik Sincoff (sophomore, UC San Diego); Jeff Lewis (sophomore, UC San Diego); and Darin Nicholson (freshman, UC Davis). We want to thank all of them for the many contributions they made to the Micro Lab, and all the help provided to users, during the summer quarter.

*Dennis Mar*

# VM/CMS NEWS

## WORDPERFECT/VM AVAILABLE

WordPerfect for IBM 370 Systems (WPVM), version 4.2, is now available to all VM users, and a *Quick Reference Guide* will be in production soon. WPVM requires at least 1500K virtual storage and use of temporary disk space (TDISK) (see below) is recommended when editing documents over 20 pages long.

Unlike other VM software, the native (default) file format for WPVM is an ASCII file, so that files created with a microcomputer-based 4.2 version of WordPerfect should be transferred to VM as a binary file. Brief instructions for using WPVM are given below; a formal guide will follow.

Type

WPVM

to enter WordPerfect.

Valid printer definitions are as follows:

| | |
|---|---|
| Printer 11 | Courier |
| Printer 18 | Sonoran Sans Serif |
| Printer 20 | Sonoran Serif |

The following keys perform the special functions indicated:

| *Key name* | *Special function* |
|---|---|
| **CLEAR** | Cancels last command and or any changes made since the last time a function key, PA2 or ENTER key was pressed. |
| **ERASE EOF** | Erase to end of line in normal edit mode; erase a code or a string of text between codes in Reveal Codes or in a search string. |
| **DUP** | Places a Hard Return in a document. |
| **FIELD MARK** | Places a Tab character in a document. |

Comprehensive on-line help may be accessed via the PF1 key; the complete manual is available for reference in In-104.

If WordPerfect indicates the need for more disk space, do the following:

1. Execute

TDISK 4

and note which filemode is assigned to the temporary disk, for example, B, and which device address, for example, (130).

2. Access the temporary disk as the default (A) disk: execute, for example

   ACCESS 130 A

   being careful to use the device address noted in step 1.

3. Access your usual A-disk as a disk with the filemode noted in step 4), for example, B:

   ACCESS 191 B

4. Remember to use that filemode when retrieving or saving a file to/from your 191 (normally your A-disk).

*Donna Schoenecker*

## MILNET CENTER NAME CHANGE

The MILNET Network Information Center (NIC) has a new name: NIC.DDN.MIL The former name, SRI-NIC.ARPA, will be recognized as an alias for a few months, to ease transition, but all MILNET users should change their NAMES files, notes, and perhaps pencil-in the new name in their copies of the *DDN New User's Guide*.

The new name reflects naming conventions now in effect for the Internet. It should be easy to remember if you think about the relationship of the parts of the name, describing the site from the specific to the general: "Network Information Center (on the) Defense Data Network (on the) MILNET".

The services offered by the NIC are unchanged, as are their phone numbers.

*Caroline Miller*

## MAKING PIE CHARTS WITH ICU

One common way of displaying how several parts make up a whole is with pie charts. IBM's Interactive Chart Utility (ICU) can be used to create as many as six pie charts on one page. This article will take a sample data set of family expenditures, Table 1, and show how to make the interactive selections under ICU to create the pie chart shown in Figure 1. Read Technical Memo *The Interactive Chart Utility (ICU) Tutorial* (available in In-146) to understand the following discussion.

1. Enter the data, either through Panel 2.2 (Data Entry and Manipulation) or Panel 2.9 (Data Import).
2. Enter Panel 1.5 to select the Pie Chart option.
3. Answer "Yes" to the question "Would you like to define the chart in more detail?". You don't see this question if you specified 1.5 as shown above.
4. Make these changes:

| *Category* | *set to* |
|---|---|
| **Pie Labeling** | 1 |
| **Tilt of Pies Away from Viewer** | 30% |
| **Thickness of Pies Compared to Size** | 20% |
| **Movement of Exploded Slice** | 30% |

   (The exploded slice is that slice which is pulled away from the rest of the pie.)

5. On Panel 2.6 in the column titled *Colors -- Shading, Markers* , change the numbers for the color of each pie slice (one line per pie slice) to '7' (black) for monochrome printing.
6. On the same panel, the patterns for each slice must also be changed to distinguish the slices. Numbers in the column *Shading Patterns* can vary between 0 and 16. Examples of these patterns are shown in the ICU manual available in In-146.
7. Also on Panel 2.6, the column *Explode Slice* should be filled in as *Yes* for the slice to be highlighted, in this case, the *Savings* slice.
8. A heading (chart title) should be added on Panel 5.1 and the question "Would you like to change the color, character size, or typestyle used for the heading?" should be answered "Yes".
9. Once in Panel 5.1.Yes, the *Character Width Multiplier* should be changed to '2.0' to make the heading a reasonable size.

More than one chart may be created with multiple Data Groups (Y variables). Each Data Group and its associated values will comprise one pie chart. The pies will be arranged horizontally; the practical limit for the number of charts displayed this way is three. However, to stack another set of three charts on top of the originals, the Multiple Charts facility (Panel 6), may be used. This is explained in the Technical Memo entitled *The Interactive Chart Utility (ICU) Tutorial*, available in In-146.

| Category | Dollars |
|---|---|
| Food | 300.00 |
| Car | 160.00 |
| Entertain | 250.00 |
| Savings | 450.00 |
| House | 1,000.00 |
| Clothes | 200.00 |
| Loan | 250.00 |

Table 1. Data for ICU Pie Chart

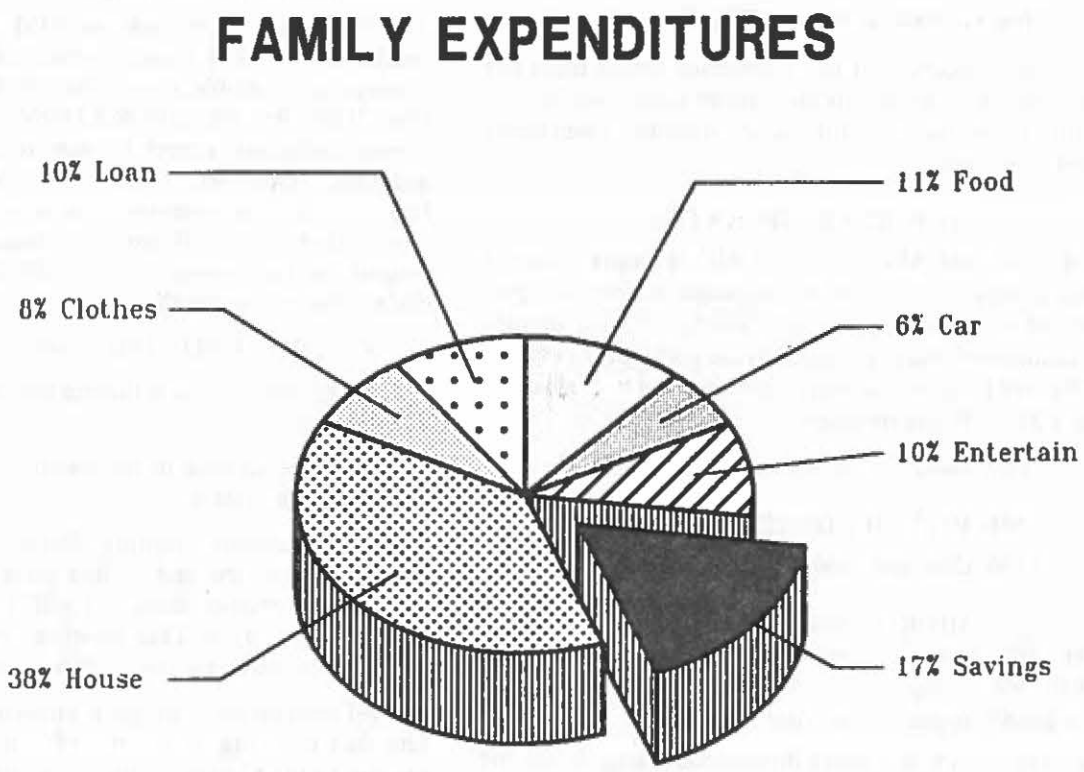



Figure 1. ICU Pie Chart

# OPERATIONS INFORMATION

## CONSULTING HOURS

**Mon-Fri 0900-1130 and 1315-1545 in In-146**

Reference materials in the Consulting Office must not be removed from that room without special permission of the Consultant on duty or a Computer Operations Shift Supervisor.

## HOURS OF OPERATION

VM/CMS and MVS are available 24 hours a day, 7 days a week. Preventive maintenance is normally performed 0700-1400 hours, first Sunday of each month. Systems work may occasionally be performed between 0700 and 1200 on Saturdays; advance notice is given in the VM/CMS log message.

*Call 646-2713 for recorded system status.*

## MICRO LAB CONSULTING HOURS

**1100-1200 and 1300-1700 Monday - Friday**

## MICRO LAB OPEN HOURS

0900-2100 Monday-Thursday
0900-1700 Friday
Weekends: as posted on Micro Lab door

See Micro Lab assistants during consulting hours for combination to access Lab when it is closed.

### MVS Job Queue Restrictions

No more than 3 MVS (Batch) jobs per individual may be executing and/or waiting execution. This policy allows each individual a fair share of batch processing capacity, and prevents spooling overload problems. Excess jobs will be cancelled.

### Information on Printed Output

The Computer Center has an IBM 3800 non-impact printer and a 3262 impact printer in In-140. These printers are available around the clock, 7 days a week. (See "HOURS OF OPERATION"). If you want a printer unloaded, expect to wait until an operator is available. However, if you have received instruction from a computer operator, you may remove printout from either printer. If you do, please leave separated output on the counter-top, or file it by distribution code. Please observe these rules:

Press the READY button after removing output.

Make sure output is folding correctly in the output hopper.

Separate all jobs in the batch of output removed from the printer.

Avoid unnecessary printing. Return output to your terminal for review and editing prior to printing. Use the default output class, SYSOUT=A, for general output from MVS. This produces two output pages per sheet of paper on the 3800 page printer.

Budget restrictions and good computing practice dictate that only one final copy of a thesis be produced on any of the Center's printers. If more than one copy is required, use of duplication facilities on campus is recommended. But please note that the NPS printshop will not cut or bind more than one personal copy.

Please put unwanted printout in any trash container in In-140, In-141, or In-151, for recycling.

This publication is published as required and is written by members of the staff, W. R. Church Computer Center (Code 0141), Naval Postgraduate School, Monterey, CA 93943. Send requests for information or suggestions for articles to the User Services Manager, Code 0141 (In-133), 646-2752 (messages: x2573). Bitnet: 0002P@NAVPGS

The Center operates an IBM 3033 Attached Processor System (16 megabytes) loosely coupled with an IBM 3033 Model U (16 megabytes) and an IBM 4381 Model P13 (16 megabytes). Interactive computing is provided under VM/SP CMS, batch-processing under MVS with JES3 networking.

**Distribution:** List 3, plus: 400-B3, 3-B4, 10-F3, 3-F4, 1-F6, 1-F7, 12-PERSEREC